Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Request by Progeny LMS, LLC for Waiver of	)	
Certain Multilateration Location and	)	WT Docket No. 11-49
Monitoring Service Rules	)	
	)	
	)	

COMMENTS OF THE UTILITIES TELECOM COUNCIL

Pursuant to Section 1.405 of the Commission's Rules, the Utilities Telecom Council ("UTC") hereby files its comments in response to the Commission's Public Notice[1] on Progeny's joint M-LMS field testing reports.[2] As described more fully below, the test reports show that Progeny's operations will substantially degrade the operational performance of millions of smart grid devices, as well as other Part 15 operations. It will also undermine substantial investments – including $4.5 billion in Federal smart grid grants – which utilities and others have made in these operations. Moreover, federal policies to promote the deployment of smart grid will be frustrated, if Progeny causes widespread interference to smart grid communications. As such, UTC urges the Commission to refrain from allowing Progeny to commercially deploy until further testing shows that it will not cause unacceptable interference to Part 15 operations in the

[1] *The Wireless Telecommunications Bureau and the Office of Engineering and Technology Seek Comment on Progeny's Joint M-LMS Field Testing Reports*, Public Notice, DA 12-1873, WT Docket No. 11-49 (rel. Nov. 20, 2012) ("Public Notice").

[2] As stated in the Public Notice, Progeny LMS, LLC conducted separate joint tests and filed separate reports on its tests with Itron, Landis+Gyr and the Wireless Internet Service Provider Association (WISPA). *See* Public Notice at n. 1-3 (collectively "Joint Test Reports").

902-928 MHz band, consistent with the terms of Progeny's conditional waiver.[3]

Background and Introduction

Founded in 1948, UTC is the international trade association for the telecommunications and information technology interests of utilities and other critical infrastructure industries. Its members own, manage and operate extensive private internal communications systems that support the safe, reliable, secure and efficient delivery of essential electric, gas and water services to the public at large. Owing to the critical nature of the underlying services that these communications systems support, they must meet high standards for performance capabilities. Interference to these communications can jeopardize the safety of life, health and property. Utilities have made substantial investments in these systems, which is also put at risk by the presence of interference to the performance of these systems.

Utilities and other critical infrastructure industries heavily rely on the 902-928 MHz band to support various utility operations, including advanced metering infrastructure (AMI) and distribution automation (DA). Millions of smart meters operate in the 902-928 MHz band, and utilities have invested billions of dollars in their deployment, including $4.5 billion in federal matching smart grid grants, under the American Reinvestment and Recovery Act of 2009.[4] These smart meters not only provide billing information, but they are also capable of providing remote connect and disconnect services as well as outage detection. Some of these applications can be critically important and very intolerant of performance degradation. Similarly, there are at least one hundred thousand radios in the 902-928 MHz band that are used for switching and SCADA applications, which must operate with latencies in the order of milliseconds.

[3] *In the Matter of Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules,* Order, 26 FCC Rcd 16878 (2011).

[4] American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 6001(k)(2)(D), 123 Stat. 115 (2009) (Recovery Act).

Interference to these applications would significantly compromise mission critical utility operations.

In order to protect the interests of its members against interference to their operations in the 902-928 MHz band, UTC has participated in this proceeding and throughout the Commission's other docketed matters related to Progeny's operations in the 902-928 MHz band.[5] In this proceeding, Progeny's waiver to operate was granted under the condition that it not cause unacceptable interference to other Part 15 operations, including smart meters and SCADA systems that use the 902-928 MHz band.[6] UTC is concerned that commercial deployment by Progeny could threaten to cause unacceptable interference to utilities and other critical infrastructure industry communications systems. Therefore, UTC is pleased to provide its comments in response to the Commission's Public Notice.

Discussion

The Commission's Public Notice in this proceeding invites comment on joint tests conducted with Itron, Landis+Gyr, and WISPA to determine if Progeny's operations would cause unacceptable interference to Part 15 operations. While Progeny claims that these joint tests show no interference to Part 15 operations[7], Itron, Landis+Gyr and WISPA argue otherwise. In their *Part 15 Parties Ex Parte*, WISPA reported that it observed a 40-50% drop in throughput when testing its Part 15 operations on the same frequencies as Progeny, and Itron stated that

[5] *See e.g.* Letter to Ms. Marlene H. Dortch, Secretary, FCC from Brett Kilbourne, VP & Deputy General Counsel, UTC in WT Docket No. 11-49 (filed May 3, 2012); *and see generally* Comments of the Part 15 Coalition in WT Docket No. 06-49 and Comments of the Part 15 Coalition in ET Docket No. 94-32. UTC is a member of the Part 15 Coalition and fully supports the Comments of the Part 15 Coalition in response to the Commission's Public Notice on Progeny's Joint M-LMS Field Testing Reports.

[6] *Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules*, WT Docket No. 11-49, Order, 26 FCC Rcd 16878, 16887 ¶ 25 (WTB OET 2011) ("Waiver Order").

[7] Letter to Marlene H. Dortch, Secretary, FCC from Bruce Olcott, Counsel for Progeny at 2 (filed Oct. 31, 2012)("*Progeny Ex Parte"*).

Progeny's "system testing" was not representative and that "packet error rate" (PER) testing provides a more accurate portrayal of the interference threat from Progeny's operations.[8] Bottom line: Progeny requests that the Commission promptly grant approval for Progeny to commence commercial operations, but the Part 15 parties caution that it would set a precedent for other M-LMS licensees that would result in further interference in the 902-928 MHz band.[9]

In response, UTC believes that the joint M-LMS field tests show that Progeny's M-LMS operations would indeed cause unacceptable interference to Part 15 devices in the band. First, the packet success rates (PSR) that were reported in the joint tests are *averaged* across the entire 902-928 MHz band, and do not reflect the actual negative impact on throughput in the 904-909.75 and 919.75-928 MHz range where Progeny operates. In addition, many of the Part 15 devices that were tested have frequency hopping spread spectrum (FHSS) capabilities, and will avoid the interference caused in that range by Progeny's operations. Because they avoid the interference from Progeny, these Part 15 devices can also maintain their throughput rates, because they can simply hop to use other available bandwidth elsewhere between 902-928 MHz. However, the tests show that actual packet rate drops significantly in those frequencies that are used by Progeny, as is shown in the charts of the packet error rate (PER) across the band.[10]

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[8] *See* Letter from Stephen E. Coran, Attorney for WISPA, to Marlene H. Dortch, Secretary, Federal Communications Commission, Ex Parte Notice Attachment, WT Docket No. 11-49 (filed Nov. 8, 2012) ("*Part 15 Parties Ex Parte*")("As opposed to system testing, Packet Error Rate ("PER") testing provides statistically significant data and is used globally to accurately characterize an RF environment. The limited PER tests in San Jose showed the difficulty of co-existing co-frequency).

[9] *See Progeny Ex Parte* at 6-7. *See also Part 15 Parties Ex Parte* at Attachment (stating that "[t]he FCC must be wary of setting the precedent of allowing one M-LMS licensee to take away 4 MHz of spectrum from unlicensed devices, precedent that would apply to other M-LMS licensees.")

[10] *See e.g.* Progeny-Itron Joint Test, attached to the Letter from Bruce A. Olcott, Counsel to Progeny LMS, LLC and Laura Stefani, Counsel for Itron, Inc. to Marlene H. Dortch, Secretary, Federal Communications Commission, Progeny LMS, LLC & Itron, Inc., Request for Confidential Treatment, Part 15 Joint Test Report, WT Docket No. 11-49 (filed October 31, 2012); Progeny-Landis+Gyr Joint Test, attached to the Letter from Bruce A. Olcott, Counsel to Progeny LMS, LLC and Lawrence J. Movshin, Counsel for Landis+Gyr Company to Marlene H. Dortch, Secretary, Federal Communications Commission, Progeny LMS, LLC & Landis+Gyr Company, Request for

Thus, interference to Part 15 devices would appear much worse in the joint tests, if the PSR wasn't averaged across the entire band and if many of the Part 15 devices were not capable of avoiding the interference from Progeny operations.

The problem is that there are many Part 15 devices that do not have frequency hopping capability, including those that are direct sequence spread spectrum (DSSS) systems, such as some of the Landis+Gyr systems. While those systems can successfully coexist with other Part 15 devices that typically operate at 1-4 watts, Progeny operates at 30 watts and its duty cycle is significantly high (80-100%), which all but precludes any coexistence with Part 15 devices.

There are also many other Part 15 devices that have not been tested by Progeny. Given the wide array of Part 15 devices that operate in the 902-928 MHz band – some with lower operating power and less interference mitigating capabilities -- additional testing is necessary before Progeny can even begin to conclusively demonstrate that it would not cause unacceptable interference to other Part 15 operations.

In any event, the Commission should not allow Progeny to commercially deploy. Progeny's operations alone could effectively remove 20% of the 902-928 MHz band from use by other Part 15 devices. Moreover, Progeny's deployment for fixed and mobile location monitoring would mean that its deployment would be pervasive geographically. Once Progeny is allowed to operate, other M-LMS operators would likely seek to operate at similar power and duty cycles, which would wipe out other parts of the 902-928 MHz band as well.

The Commission must remain mindful that the 902-928 MHz band is heavily used for a variety of commercial, industrial and consumer applications. It should not threaten this existing

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Confidential Treatment, Part 15 Joint Test Report, WT Docket No. 11-49 (filed October 31, 2012) ("Progeny-Landis+Gyr Letter"); *and* Progeny-WISPA Testing, attached to the Letter from Bruce A. Olcott, Counsel to Progeny LMS, LLC and Stephen E. Coran, Counsel for WISPA to Marlene H. Dortch, Secretary, Federal Communications Commission, Progeny LMS, LLC & Wireless Internet Service Providers Association, Part 15 Joint Test Report, WT Docket No. 11-49 (filed October 31, 2012).

productive use of the band by allowing Progeny and other M-LMS operations to cause unacceptable interference to Part 15 operations in it. As UTC explained above, the 902-928 MHz band is heavily used by utilities and other critical infrastructure industries, and interference to these systems could impact their operations and undermine the significant investment that has been made in these systems.

Conclusion

WHEREFORE, the premises considered, UTC respectfully submits that the test reports show that Progeny would cause unacceptable interference to Part 15 operations in the band, including devices used by utilities and CII to support AMI and SCADA applications. Therefore, UTC requests that the Commission reject Progeny's request for authorization to commercial deploy its M-LMS network.

Respectfully submitted,

Utilities Telecom Council

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